

WHAT IS CLAIMED IS:

1. A printhead comprising an element substrate having a digital circuit and analog circuit,  
said digital circuit including a printing element  
5 and drive means for driving said printing element in accordance with input print data, and  
said analog circuit including detection means for obtaining information,  
wherein a value of a voltage for driving said  
10 digital circuit is different from a value of a voltage for driving said analog circuit, and  
a voltage generation circuit for generating the voltage for driving said analog circuit is arranged on said element substrate.
- 15 2. The printhead according to claim 1, further comprising a capacitor arranged outside said element substrate and having one terminal connected to the voltage for driving said analog circuit and the other terminal grounded.
- 20 3. The printhead according to claim 1, wherein said voltage generation circuit generates the voltage for driving said analog circuit from a voltage for driving said printing element.
4. The printhead according to claim 1, wherein said  
25 voltage generation circuit comprises a dividing resistor and a transistor.
5. The printhead according to claim 1, wherein said

voltage generation circuit comprises a noninverting amplifier.

6. The printhead according to claim 1, wherein said digital circuit comprises a shift register for  
5 temporarily storing the print data and a latch for holding the data stored in said shift register.

7. The printhead according to claim 1, wherein said analog circuit comprises means for detecting an external temperature of said element substrate or means  
10 for monitoring a heater resistance value.

8. The printhead according to claim 1, wherein said printhead is an inkjet printhead which ejects ink to print.

9. The printhead according to claim 8, wherein said  
15 printing element comprises a thermal energy transducer for generating thermal energy to be applied to the ink so as to eject the ink using the thermal energy.

10. The printhead according to claim 9, wherein said detection means detects a temperature of said element  
20 substrate.

11. The printhead according to claim 9, wherein said digital circuit comprises a memory for storing at least one of pieces of information related to a resistance value of said electrothermal transducer, a resistance  
25 value upon operation of said drive means, and a thickness of each layer of said element substrate.

12. The printhead according to claim 1, wherein the

value of the voltage for driving said digital circuit is 3.3 V, and the value of the voltage for driving said analog circuit is 5 V.

13. A printing apparatus for printing using a  
5 printhead,

wherein said printhead comprises an element  
substrate having a digital circuit and analog circuit,  
said digital circuit including a printing element and  
drive means for driving said printing element in  
10 accordance with input print data, and said analog  
circuit including detection means for obtaining  
information,

a value of a voltage for driving said digital  
circuit is different from a value of a voltage for  
15 driving said analog circuit, and

a voltage generation circuit for generating the  
voltage for driving said analog circuit is arranged on  
said element substrate.